

AMSAT News Service Weekly Bulletins

Issue: ANS-147

Date: 1989-05-27

Sources: amsat-ans-1989-ans-147-weekly.txt

Posted: Sat, May 27, 1989 7:10 PM GMT Msg: BGJ-3958-5112
From: DCOWDIN
To: IS
CC: WIAW
Subj: \$ANS-147

SB ALL @ AMSAT \$ANS-147.01
RS 12/13 LAUNCH IMMINIENT!

HR AMSAT NEWS SERVICE BULLETIN 147.01 FROM AMSAT HQ
SILVER SPRING, MD MAY 27, 1989
TO ALL RADIO AMATEURS BT

RS 12/13 Is Scheduled To Be Launched In June

AMSAT-NA has learned from Ron Broadbent, G3AAJ, that the launch of RS 12/13 is imminent. This information was made available from reliable Russian sources familiar with amateur satellite activities in the Soviet Union. It is felt by G3AAJ's colleagues in the Soviet Union that the launch of RS 12/13 will occur sometime in June.

RS 12/13 will closely resemble RS 10/11 in many ways. It will support modes A, K, KA, KT, and T; also RS 12/13 will possess a "robot." Like RS 10/11, this new Radio Sputnik "bird" will fly "attached" to a maritime navigational satellite. The preliminary orbital characteristics are the following: 1000 mile circular orbit, 83 degree inclination, and 105 minute nodal period [equator-to-equator]. AMSAT-NA urges all OSCAR enthusiasts to monitor the planned beacon frequencies of 29.408 MHz for RS 12 and 29.4582 MHz for RS 13. The "robot" downlink frequencies for RS 12/13 will be 29.4543 MHz and 29.5043 MHz, respectively. At the present time it is unknown which beacon and/or "robot" will be turned on first after launch. Amateurs wishing to use RS 12/13 should look for transmissions on all four frequencies mentioned above.

If you should hear the CW beacon on these frequencies for RS 12/13, please contact AMSAT HQ's [(301) 589-6062] so that this information can be passed along to AMSAT Net Control Stations for announcement during the many regular AMSAT Nets each week. Please include the date, time, frequency, your call, and QTH. In the meanwhile, all those who have Amateur Satellite Report (ASR) #183 can refer to it for the "preliminary" bandplan information. When the exact frequencies are known, AMSAT-NA will publish them as quickly as possible in ASR, post them on the AMSAT-NA BBS [(303) 447-3003], and will also make them part of the next AMSAT News Service (ANS) Bulletins.

When informed of this, Doug Loughmiller (K05I), AMSAT-NA President, indicated that amateur satellite enthusiasts would be watching the developments with great interest and anticipation. Doug also added: "We wish our Russian colleagues great success with their latest endeavor."

/EX
SB ALL @ AMSAT \$ANS-147.02
DOVE DOWNLINK FREQUENCY REVISED

HR AMSAT NEWS SERVICE BULLETIN 147.02 FROM AMSAT HQ
SILVER SPRING, MD MAY 27, 1989
TO ALL RADIO AMATEURS BT

Further Clarification Provided On The Dove Frequency Change To 145.825 MHz

AMSAT-NA regrets that there were errors in the reporting of this topic in AMSAT News Service (ANS) Bulletin ANS-139.02 last week. AMSAT-NA hereby provides this further clarification and apologizes for any confusion or misconceptions that resulted from our initial report of this topic.

As announced last week in ANS-139.02, BRAMSAT President, Dr. Junior de Castro (PY2BJ0), has given the "OK" to move the Digital Orbiting Voice Encoder (DOVE) downlink frequency to 145.825 MHz. AMSAT-NA, BRAMSAT, and the University of Surrey officials would like to further explain the reasons justifying this bandplan change. Several months ago, Dr. Martin Sweeting (G3YJ0) of the University of Surrey initiated a "orbital mechanics" analysis to study the potential for mutual interference if both DOVE and UO-11 used the same downlink frequency of 145.825 MHz. It was found by studying the AOS and LOS times for the projected DOVE orbit and the current UO-11 orbit there would only be a few occasions when DOVE and UO-11 would appear simultaneously over the same QTH; thus, mutual QRM would be minimal. After careful study of the results of this analysis, Martin Sweeting (G3YJ0) offered the suggestion that DOVE change frequencies to Jan King (W3GEY), AMSAT-NA VP for Engineering and MICROSAT Program Manager. It was obvious from an engineering standpoint that the only impact this would have was a change in crystals in the DOVE transmitter and this change could be easily accommodated. After Jan King presented this suggestion to BRAMSAT President, Junior de Castro (PY2BJ0), Junior agreed with this suggestion that DOVE should also utilize this established frequency for amateur educational and scientific satellites.

It is hoped that this brief discussion will clear up any misconceptions regarding this frequency selection for the DOVE downlink.

/EX

SB ALL @ AMSAT \$ANS-147.03
N4HY ATTENDS MEETINGS IN PARIS

HR AMSAT NEWS SERVICE BULLETIN 147.03 FROM AMSAT HQ
SILVER SPRING, MD MAY 27, 1989
TO ALL RADIO AMATEURS BT

Bob McGwier (N4HY) Attends Meetings With Arianespace Officials In Paris

Bob McGwier (N4HY), AMSAT-NA Assistant VP for Engineering, met with Ariane-space officials to discuss many important topics related with the launch of the MICROSATs during his brief trip to Paris on May 10-11th. Also in attendance was Dr. Martin Sweeting (G3YJ0) representing the University of Surrey as well as SPOT-2 payload representatives. This AMSAT News Service (ANS) Bulletin will only cover the major points of these very important meetings.

The launch of the ARIANE IV carrying SPOT-2, UOSAT D & E, and the MICROSATs has now been set for November 9, 1989 at 01:35:27 UTC. The first major payload separation event occurs after a Mission Elapse Time (MET) of 17 minutes 8 seconds after launch when the SPOT-2 satellite separates from the 3rd stage of the ARIANE IV. After a reorientation maneuver of the 3rd stage is performed, at 20 minutes 9 seconds (MET) UOSAT D & E will be released. Next, after another reorientation maneuver of the 3rd stage is accomplished, at 21 minutes 6 seconds MET all four of the MICROSATs will be separated from the 3rd stage. Finally, the 3rd stage will vent any remaining fuel it has left in its tanks and simultaneously perform a "collision avoidance" maneuver. By the end of the first day, it is predicted that the MICROSATs will be approximately 1000 km away from SPOT-2 and anywhere from 70 to 170 km away from UOSAT D & E. The MICROSATs, it is predicted, will be separated from each other by distances that range from 30 km to 100 km.

On May 11th a fit check was performed with the vibration "test-model" to see how well the MICROSATs would mate to the Ariane Small Auxillary Payload (ASAP) structure. It was found that except for a small cable that needed to be

re-routed, the vibration test-mode fitted perfectly in all of the four positions where MICROSATs would be mounted on the ASAP structure. The only other concern was expressed about the DOVE 2m downlink antenna. A special "cup-like" struture will be fabricated to "spiral" that particular antenna inside of and hold it there until DOVE separates from the ASAP structure. It was felt by the engineers involved that this would allow the "long" 2m downlink antenna to uncurl nicely from the spacecraft at separation. The major concern was that the tip of the 2m downlink antenna might touch some of DOVE solar cells at separation from the ASAP structure.

Bob McGwier (N4HY) indicated that series of meetings with Arianespace officials went extremely well. The "fit check" was one of the major "milestones" which had to be passed in order to have the MICROSATs "approved" for flight aboard the ARIANE IV launch vehicle this November.

/EX
SB ALL @ AMSAT \$ANS-147.04
LAUNCH SCHEDULE FOR OSCARS

HR AMSAT NEWS SERVICE BULLETIN 147.04 FROM AMSAT HQ
SILVER SPRING, MD MAY 27, 1989
TO ALL RADIO AMATEURS BT

A Summary Of All Planned Amateur Radio Satellite Launches

Last week Tom Clark (W3IWI) had a chance to talk with Eduardo Dias who is the manager of a satellite tracking station in Santiago Chile. This was one of the tracking stations which supported the launch of the Japanese H-1 rocket that carried F0-12. Eduardo mentioned that the next Japanese launch of their H-1 rocket has been set for January 23, 1990. Eduardo said that he had been contacted by the JARL and asked if he could provide amateur radio support since JAS-2 will also fly on this mission. JAS-2 will be the "follow-on" to F0-12.

At this point AMSAT would like to give a quick "run-down" of all known amateur radio satellite launch activies scheduled for next several months.

SATELLITE	LAUNCH DATE
=====	=====
RS-12/13	June '89
PACSAT	11/09/89
LUSAT	11/09/89
DOVE	11/09/89
UOSAT D	11/09/89
UOSAT E	11/09/89
JAS-2	01/23/90

/EX
SB ALL @ AMSAT \$ANS-147.05
U2MIR HAS DINNER AT W4PUJ QTH

HR AMSAT NEWS SERVICE BULLETIN 147.05 FROM AMSAT HQ
SILVER SPRING, MD MAY 27, 1989
TO ALL RADIO AMATEURS BT

Musa Manoroff (U2MIR) Visited W4PUJ And Others For An "Eyeball" QSO

On the evening of May 12, Dick Daniels (W4PUJ) along with Tom Clark (W3IWI), John Shew (N4QQ), Martha Saragovitz (XYL of N4QQ), Rich Zwirko (K1HTV), and the XLY's of W4PUJ, W3IWI, and K1HTV, all had the privilege of meeting the MIR Space Station Cosmonaut Musa Manaroff (U2MIR). Musa was in the US to visit with NASA space medicine specialists as a "specimen" to prove that humans can survive 366 days in space with no long term ill effects. Through their contacts in NASA, W3IWI and W4PUJ were able to arrange a dinner party for Musa

at W4PUJ's QTH.

During the dinner party, Musa told many humorous anecdotes about his year long stay in outer space. He commented about spending "366 times 16" [orbits/day] nights away from his wife and children (ages 7 and 8). Musa talked about the size of Mir which was about two normal rooms. Musa emphasized that when the Yaseu FT-290 transceiver arrived in November of '88, amateur radio operations from Mir provided a great deal of enjoyment. Although Musa is an electrical engineer, before he was licensed in space aboard Mir, he was only a SWL. Musa said that he hopes to remain active in amateur radio and keep his U2MIR call.

Later in the evening Musa had a chance to see W4PUJ's hamshack and enjoyed tuning around the 20M band and also listening to the downlink passband of AO-13. Tom Clark showed Musa some of the receiver modules he was building for the MICROSATs and also the "little" packet unit (Tasco/Heath HK21 TNC) which Astronaut Ron Parise (W4SIR) will carry on a future Space Shuttle mission.

In saying "73's" for the evening, W3IWI on behalf of AMSAT, presented Musa an honorary "life-membership." Musa also recieved one the new MICROSAT patches. In summary, it was a very enjoyable evening for all those who attended this "eyeball QSO," and it only proves without a doubt that Amateur Radio certainly does promote international goodwill and friendship.

/EX

SB ALL @ AMSAT \$ANS-147.06
AMSAT SHORT BURSTS

HR AMSAT NEWS SERVICE BULLETIN 147.06 FROM AMSAT HQ
SILVER SPRING, MD MAY 27,1989
TO ALL RADIO AMATEURS BT

AMSAT Short Bursts

The following will be the operating schedules for AMSAT OSCAR-13 for the next several months. Please post this in a convenient place in your ham shack for quick reference.

M de VK5AGR 14May89: *** AO-13 Transponder Schedule Update ***
14May89 to 14Jun89

Mode-JL from MA 160 to MA 200 ! Mode-B from MA 200 to MA 160
Also, for a trial period the OMNI-directional 70cm antenna will be connected to the Mode-B RCVR from MA 20 to MA 40. These changes have been introduced to enable stations who have access around perigee to experiment with perigee operation. Mode S unchanged.
14May89: BLON/BLAT 212.0/+2.4 with a drift rate of 0.016/-0.061 deg/day, respectively.

O S C A R - 1 3

Date	:	14Jun89 until 16Aug89	!	16Aug89 until 16Nov89
Attitude:		180/0	!	210/0
Mode-B	:	MA 0 to MA 110	!	MA 3 to MA 160
Mode-JL	:	MA 110 to MA 145	!	MA 160 to MA 200
Mode-B	:	MA 145 to MA 255	!	MA 200 to MA 240
OFF	:	%	!	MA 240 to MA 3
Mode-S	:	MA 150 to MA 160	!	MA 210 to MA 222

Transponders will be in operation during the whole orbit from June 14 until Aug 16 due to excellent sunangle and power budget. No perigee operation between August and November due to perigee solar eclipses!

In celebration of the 75th anniversary of the founding of the American Radio Relay League, there will be a commemorative station operation under the callsign of W1AW/5 on 2-4 June, 1989. This activity will take place at the

ARRL National Convention in Arlington, TX. The hours of operation will be from 17:00 UTC on Friday, 2 June through 18:00 UTC on Sunday, 4 June. In keeping with the convention theme "FROM SPARK...1914-1989...TO SPACE," a "deluxe" satellite station will be set up. It is the intention of the station planners to operate this station on every pass of every Amateur Radio Satellite that comes within view of Arlington, Texas during this operating period. All modes of operations will be supported from Mode A, B, J, and L. So listen and try to work W1AW/5 on every OSCAR satellite you can. Crank up your satellite tracking programs and check for windows "of mutual visibility" to Arlington, Texas, for 2-4 June, 1989. For those with QT4.0 who would like to use the "mutual visibility" option, Arlington, TX has the following coordinates: Long=97.083W, Lat=32.750N, and Height above sea-level: 210 Meters.

AMSAT is seeking additional Area Coordinators throughout North America. These additional members of the Field Operations organization are needed to support the expected inrush of activity and excitement centered about the launch of an additional six or seven amateur radio satellites this year. AMSAT-NA is seeking those who wish to promote the Amateur Radio Satellite program, and primarily, those experienced satellite users who will serve as "Elmers" for aspiring satellite enthusiasts. If you are interested in joining this team of "make it happen" amateurs, contact the AMSAT VP of Field Operations:

Jack Crabtree, AA0P
4327 W. Bellewood Dr.
Littleton, CO 80123
(303) 795-7736

Many A0-13 users are unaware that there is an AMSAT Operations Net which is conducted on A0-13 several times each month to help answer questions about OSCAR satellites and to provide information about the many exciting things going on in AMSAT. The following is a list of the times for the Ops Net. Please place this list in a convenient place in your OSCAR station so that you won't miss out on this interesting net which is offered as a service to all AMSAT members.

Here is the Ops Net schedule through June:

Date	UTC	orb-phs	NCS
28 May	0200	731-105	(27 May local)
04 Jun	0300	746-045	(03 Jun local)
11 Jun	0000	760-152	(10 Jun local)
18 Jun	0100	775-092	W0RPK (17 Jun local)
25 Jun	0300	790-055	(24 Jun local)

Nets can be held on B or JL, but if the A0-13 satellite schedule is changed such that the Ops Net falls during an "off" period, it will be rescheduled. Downlink frequencies are 145.950 MHz and 435.970 MHz for Mode B and JL, respectively. All these are for A0-13 but A0-10 is sometimes used when available.

The following is the operating schedule for F0-12 for the rest of the month of May and for June:

DATE	MODE	OPERATING PERIOD
05/28/89	JD	00:56 UTC until 09:08 UTC
06/03/89	JD	05:46 UTC until 00:44 UTC on 06/04/89
06/09/89	JA	04:25 UTC until 21:20 UTC
06/21/89	JA	01:43 UTC until 18:38 UTC
06/24/89	JA	01:03 UTC until 17:58 UTC
06/29/89	JA	00:35 UTC until 15:29 UTC

de DB20S 01May89: *** A0-10 TRANSPONDER SCHEDULE ***

01May89 to 13Jul89

Mode-B : from MA 025 to MA 225
OFF : from MA 226 to MA 024

All radio amateurs who live in the Northern California area are reminded of the "Shasta SpaceCon '89" which will be held in Weed, CA on June 17th at the Student Center of the College of the Siskiyous. This all day seminar is designed to be a "beginners introduction" OSCAR satellites. Many excellent speakers from AMSAT-NA and Project OSCAR will be present. For more information about this fine seminar, please contact Bob Dalleske (W6AMW) at (916) 964-3154.

/EX